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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,111	11/16/2001	Arnab Das	15-19-15-2	3440
30594	7590	09/27/2005	EXAMINER	
HARNESSE, DICKEY & PIERCE, P.L.C.			AGHDAM, FRESHTEH N	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2631	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/991,111	Applicant(s) DAS ET AL.	
	Examiner Freshteh N. Aghdam	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 05/04/2005 have been fully considered but they are not persuasive.

Applicant's Response: In page 6, lines 12-15, regarding claims 1-10 and 12-14, applicant argues that the claimed invention is not taught or suggested by Kim " Each of the claims is directed at a method which uses a shared control channel to either transmit or receive encoded signaling information. Kim does not disclose the use of a shared control channel to transmit or receive encoded signaling information, as in the claims of the present invention

Examiner Response: Regarding claims 1-10, Kim discloses that the use of a shared control channel to transmit or receive encoded signaling information is well known in the art (Col. 1, Lines 47-52; Col. 5, Lines 9-18; Col. 6, Lines 21-35; Col. 10, Lines 4-57).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10 and 13-14 are rejected under 35 U.S.C. 102(e) as being unpatentable by Kim et al (US 6,438,119).

As to claim 1, Kim teaches a method for processing control information in a wireless communication system via a control channel for signaling information (column 1, lines 47-52; column 5, lines 9-18; column 6, lines 21-35; column 10, lines 4-57), and another channel for data (column 4 lines 30-34; column 10, lines 4-57., figure 4). Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46- column 7, line 19; column 15, lines 58- column 16, lines 28; figures 1-2; table 4).

As to claim 3, Kim teaches a dedicated control channel (column 1, lines 47-52; column 5, lines 9-18) used by a plurality of mobile stations for communicating with a base station (column 5, lines 9-18). The control channel is used to send signaling information (column 1 line 47; column 2, line 24; column 13, lines 51-64; column 15, line 67; column 16, lines 1-28).

As to claim 4, Kim teaches a method for processing control information, wherein the control information, or signaling information, includes: transport format and resource-related information about the frame length of the data transmitted (column 2, lines 14-25; column 7, lines 21 -49); and cyclic redundancy check information (column 2, lines 26-34; column 7, lines 21-33).

As to claim 5, Kim teaches a method for processing control information, wherein the control information includes transport format and resource-related

information, which includes transmission format information, Kim teaches the transmission format information in the form of frame length of the data transmitted (column 2, lines 14-25., column 7, lines 21-49); allocated rate of the data transmitted; allocated duration of the data transmitted; message identifier, direction, and type; and channel use starting time (column 9, lines 33-68; table 3).

As to claim 6, Kim teaches a method for processing control information, wherein the control information includes transmission format information, which includes: code and modulation information in the form of type of code used: Walsh code, quasi-orthogonal code, Bi-phase Shift Keying, or Quadrature Phase Shift Keying (column 13, lines 3-23); transport block set size information in the form of frame length of the data transmitted (column 2, lines 14-25; column 7, lines 21-49); and transport channel identification information in the form of pilot channel information for estimating the channel gain and phase and for performing acquisition and handoff (column 5, lines 49-64); and channel identifier and a channel parameter (column 7, lines 1-10); and channel use starting time (column 9, lines 33-68; table 3).

As to claim 7, Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46-; column 7, line 19; column 15, lines 58- column 16, lines 28; figures 1-2; table 4; figures 1-2).

As to claim 8, Kim teaches convolutionally coding signaling information, and adding tail bits to the encoded signaling information (column 12, lines 13-37).

As to claim 9, Kim teaches convolutionally coding signaling information,

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and selectively adding tail bits to the encoded signaling information (column 12, lines 13-37).

As to claim 10, Kim teaches convolutionally coding signaling information and puncturing selected bits from the encoded signaling information (column 12, line 65- column 13, line 19).

As to claim 13, Kim teaches a method for transmitting control information in a wireless communications system via a control channel for transmitting format information (column 1, lines 47-52; column 6, lines 21-35; column 10, lines 4-57), and another channel for data (column 4, lines 30-34; column 10, lines 4-57; figure 4). The transmission information format information includes those taught by Kim in the rejection of claim 6. Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, lines 46- column 7, line 19; column 15, lines 58- column 16, lines 2; table 4; figures 1-2).

As to claim 14, Kim teaches a method for decoding control information in a wireless communication system including a control channel that could be a shared or a dedicated control channel (column 1, lines 47-52; column 5, lines 9-18) used by a plurality of mobile stations for communicating with a base station (column 5, lines 9-18). The control channel is used to send transmission format information (column 1, lines 47-52; column 2, line 24; column 13, lines 51-64). Kim teaches a method for processing control information in a wireless communication system via a control channel for transmission format information (column 1, lines 47-52; column 6, lines 21-35; column 10, lines 4-57), and another channel for data (column 4, lines 30-34; column 10, lines 4-

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57; figure 4). The transmission information includes those taught by Kim in the rejection of claim 6. Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46-column 7, line 19; As to claim13, Kim teaches a method for transmitting control information in a wireless communications system via a control channel for transmitting format information (column 1, lines 47-52; column 6, lines 21-35; column 10,lines 4-57), and another channel for data (column 4, lines 30-34; column 10, lines 4-57; figure 4). The transmission information format information includes those taught by Kim in the rejection of claim 6. Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, lines 46- column 7, line 19; column 15, lines 58- column 16, lines 2; table 4; figures 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim, and further in view of Lee et al (US 6,621,873).

As to claims 11 and 12, Kim teaches all the subject matters claimed above, except for the puncturing of bits from the portion of the encoded signaling information that is separately decoded is less than the puncturing of bits from the remaining

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encoded signaling information. Lee, in the same field of endeavor, teaches puncturing of bits from the portion of the encoded signaling information that is separately decoded is less than the puncturing of bits from the remaining encoded signaling information (column 6, lines 7-43; figures 3-5). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Lee with Kim in order to minimize or avoid puncturing of tail symbols according to the code rate, thereby increasing the decoding capability of the receiver (column 6, lines 32-37).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koo et al (US 2002/0071407) see the description of figure 3; and Walton et al (US 2003/0125040) see figures 3A-3E.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

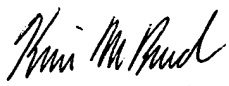
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Freshteh Aghdam

September 21, 2005


KEVIN BURD
PRIMARY EXAMINER